Salvador Dura-Bernal

List of Publications by Year
in descending order

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37 papers	1,168 citations	687363 13 h-index	477307 29 g-index
52 all docs	52 docs citations	52 times ranked	1197 citing authors

#	Article	IF	Citations
1	Multiscale Computer Model of the Spinal Dorsal Horn Reveals Changes in Network Processing Associated with Chronic Pain. Journal of Neuroscience, 2022, 42, 3133-3149.	3.6	22
2	Training a spiking neuronal network model of visual-motor cortex to play a virtual racket-ball game using reinforcement learning. PLoS ONE, 2022, 17, e0265808.	2.5	4
3	Multiscale Modeling Meets Machine Learning: What Can We Learn?. Archives of Computational Methods in Engineering, 2021, 28, 1017-1037.	10.2	164
4	Local glutamate-mediated dendritic plateau potentials change the state of the cortical pyramidal neuron. Journal of Neurophysiology, 2021, 125, 23-42.	1.8	14
5	Effects of I_h and TASK-like shunting current on dendritic impedance in layer 5 pyramidal-tract neurons. Journal of Neurophysiology, 2021, 125, 1501-1516.	1.8	9
6	NetPyNE Implementation and Scaling of the Potjans-Diesmann Cortical Microcircuit Model. Neural Computation, 2021, 33, 1993-2032.	2.2	5
7	The SONATA data format for efficient description of large-scale network models. PLoS Computational Biology, 2020, 16, e1007696.	3.2	32
8	Simulating Large-scale Models of Brain Neuronal Circuits using Google Cloud Platform. , 2020, 2020, 505-509.		6
9	Open Source Brain: A Collaborative Resource for Visualizing, Analyzing, Simulating, and Developing Standardized Models of Neurons and Circuits. Neuron, 2019, 103, 395-411.e5.	8.1	56
10	Integrating machine learning and multiscale modelingâ€”perspectives, challenges, and opportunities in the biological, biomedical, and behavioral sciences. Npj Digital Medicine, 2019, 2, 115.	10.9	319
11	NetPyNE, a tool for data-driven multiscale modeling of brain circuits. ELife, 2019, 8, .	6.0	109
12	Geppetto: a reusable modular open platform for exploring neuroscience data and models. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20170380.	4.0	23
13	Optimization by Adaptive Stochastic Descent. PLoS ONE, 2018, 13, e0192944.	2.5	15
14	Optimizing computer models of corticospinal neurons to replicate in vitro dynamics. Journal of Neurophysiology, 2017, 117, 148-162.	1.8	37
15	Restoring Behavior via Inverse Neurocontroller in a Lesioned Cortical Spiking Model Driving a Virtual Arm. Frontiers in Neuroscience, 2016, 10, 28.	2.8	32
16	Multitarget Multiscale Simulation for Pharmacological Treatment of Dystonia in Motor Cortex. Frontiers in Pharmacology, 2016, 7, 157.	3.5	29
17	Simulation Neurotechnologies for Advancing Brain Research: Parallelizing Large Networks in NEURON. Neural Computation, 2016, 28, 2063-2090.	2.2	40
18	Computer modeling for pharmacological treatments for dystonia. Drug Discovery Today: Disease Models, 2016, 19, 51-57.	1.2	9

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19	Large-scale M1 microcircuit model with plastic input connections from biological PMd neurons used for prosthetic arm control. BMC Neuroscience, 2015, 16, .	1.9	2
20	Spiking network modeling of neuronal dynamics in individual rats. BMC Neuroscience, 2015, 16, .	1.9	3
21	Cortical Spiking Network Interfaced with Virtual Musculoskeletal Arm and Robotic Arm. Frontiers in Neurorobotics, 2015, 9, 13.	2.8	22
22	Repairing lesions via kernel adaptive inverse control in a biomimetic model of sensorimotor cortex. , 2015, , .		6
23	Towards real-time communication between in vivo neurophysiological data sources and simulator-based brain biomimetic models. Journal of Computational Surgery, 2014, 1, 1-23.	0.6	6
24	Modulation of virtual arm trajectories via microstimulation in a spiking model of sensorimotor cortex. BMC Neuroscience, 2014, 15, .	1.9	1
25	Network-level effects of optogenetic stimulation in a computer model of macaque primary motor cortex. BMC Neuroscience, 2014, 15, .	1.9	2
26	Towards a real-time interface between a biomimetic model of sensorimotor cortex and a robotic arm. Pattern Recognition Letters, 2014, 36, 204-212.	4.2	15
27	Audio-visual saliency map: Overview, basic models and hardware implementation. , 2013, , .		10
28	Virtual musculoskeletal arm and robotic arm driven by a biomimetic model of sensorimotor cortex with reinforcement learning. , 2013, , .		8
29	MULTIMODAL INTEGRATION OF MICRO-DOPPLER SONAR AND AUDITORY SIGNALS FOR BEHAVIOR CLASSIFICATION WITH CONVOLUTIONAL NETWORKS. International Journal of Neural Systems, 2013, 23, 1350021.	5.2	9
30	Top-Down Feedback in an HMAX-Like Cortical Model of Object Perception Based on Hierarchical Bayesian Networks and Belief Propagation. PLoS ONE, 2012, 7, e48216.	2.5	28
31	Modelling object perception in cortex: Hierarchical Bayesian networks and belief propagation. , 2011, , .		2
32	Gait-based person and gender recognition using micro-doppler signatures. , 2011, , .		19
33	The Role of Feedback in a Hierarchical Model of Object Perception. Advances in Experimental Medicine and Biology, 2011, 718, 165-179.	1.6	11
34	Human Action Categorization Using Ultrasound Micro-Doppler Signatures. Lecture Notes in Computer Science, 2011, , 18-28.	1.3	13
35	6. Neurocomputational models of perceptual organization. Advances in Consciousness Research, 2010, , 147-177.	0.2	1
36	The SONATA Data Format for Efficient Description of Large-Scale Network Models. SSRN Electronic Journal, 0, , .	0.4	6

#	Article	IF	Citations
37	Modernizing the NEURON Simulator for Sustainability, Portability, and Performance. Frontiers in Neuroinformatics, 0, 16, .	2.5	16